

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1-14. (Canceled)

15. (Previously Presented) A method for creating, maintaining, and releasing sessions between a plurality of customer premises equipment (CPE) and service providers via an Asynchronous Transfer Mode (ATM) access node, the method comprising:

connecting one or more CPEs to the ATM access node via a network termination (NT) point;

establishing a permanent virtual connection between the ATM access node and the NT point;

establishing a tunneling protocol integrated with a signaling protocol over the permanent virtual connection between the ATM access node and the NT point;

forming a virtual connection between the ATM access node and a service provider of choice on receipt of a request for a new session from the customer premise equipment indicating the service provider of choice, wherein only one virtual connection is formed between the ATM access node and each service provider; and

at the ATM access node, performing routing between the customer premises equipment and the service provider using routing information provided by the signaling protocol.

16. (Previously Presented) The method of claim 15, wherein the ATM node comprises an access server function.

17. (Previously Presented) The method of claim 16, wherein the access server function is provided on a dedicated network element.

18. (Previously Presented) The method of claim 16, wherein the access server function is integrated into or co-located with an ATM switch.

19. (Previously Presented) The method of claim 16, wherein the access server function comprises a Digital Subscriber Line Access Multiplexer (DSLAM).

20. (Previously Presented) The method of claim 15, wherein the virtual connection comprises a permanent virtual connection.

21. (Previously Presented) The method of claim 15, wherein the virtual connection comprises a switched virtual connection.

22. (Previously Presented) The method of claim 15, wherein the service provider is an Internet service provider (ISP).

23. (Previously Presented) The method of claim 15, wherein the service provider is a content provider.

24. (Previously Presented) The method of claim 15, wherein the service provider is a corporate network server.

25. (Previously Presented) The method of claim 15, wherein one or more communication sessions are established via the respective permanent virtual connection formed between the ATM node and the respective network termination point.

26. (Previously Presented) The method of claim 15, further comprising:
provisioning a pool of permanent virtual connections between the ATM node and the service provider; and

selecting a permanent virtual connection from the pool of permanent virtual connections to be used for a plurality of the consumer premises equipment, the selected permanent virtual connection being used by the routing step to connect communication sessions to the service provider.

27. (Canceled)

28. (Previously Presented) The method of claim 15, wherein the tunneling protocol comprises the Layer 2 Tunneling Protocol (L2TP).

29. (Previously Presented) The method of claim 15, further comprising:

receiving at the ATM node a selection of the service provider from a customer premises equipment via the integrating signaling protocol.

30. (Previously Presented) The method of claim 15, further comprising:

selecting the service provider by signaling from the ATM node.

31-46. (Canceled)

47. (Previously Presented) The method of claim 15, wherein the tunneling protocol combines the sessions and signaling from all active CPEs connected to the NT point into a single tunnel from the NT point to the ATM access node.

48. (Previously Presented) The method of claim 15, wherein the NT point comprises a LAN interface configured automatically using a Dynamic Host Configuration Protocol (DHCP).

49. (Previously Presented) The method of claim 15, wherein the NT point comprises an ATM interface configured using a Interim Local Management Interface (ILMI) protocol.